

Claims

1. Adjustable touch-triggered probe for orienting a measuring feeler relative to a measuring apparatus, comprising:

5 a supporting element;

 a first mobile element connected to said supporting element through a first axis for turning said first mobile element relative to said supporting element;

10 a first resilient device for holding said first mobile element in a locked position, preventing said first mobile element from rotating;

 a second mobile element connected to said first mobile element through a second axis for turning said second mobile element relative to said first mobile element;

15 a second resilient device, that can be actuated independently from said first resilient device, for holding said second mobile element in a locked position, preventing said second mobile element from rotating.

2. Probe according to claim 1, comprising a first actuator in opposition to said first resilient device, for disengaging said first mobile element, allowing said first mobile element to rotate around said first axis, and a second actuator, independent from the first actuator, for disengaging said second mobile element, allowing said second mobile element from rotating around said second axis.

3. Probe according to claim 2, wherein the disengaging of said first mobile element and/or of said second mobile element is effected by displacement in the direction of said first respectively second axis.

4. Probe according to claim 1, comprising first indexing elements for defining a multiplicity of predetermined and reproducible angular positions for said first mobile element and/or second indexing elements for defining a multiplicity of predetermined and reproducible angular positions for said second mobile element.
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5. Probe according to claim 1, comprising a measuring feeler fastened to said second mobile element.
6. Probe according to claim 2, wherein said first actuator and/or said second actuator disengage said first respectively second mobile element by the action of two external forces essentially symmetrical and opposed being applied to said first respectively second actuator.
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7. Probe according to claim 6, wherein said first actuator and/or said second actuator drive said first respectively second element in rotation through the action of a torque of external forces applied to said first respectively second actuator.
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8. Probe according to claim 6, wherein said first actuator and/or said second actuator are designed to cease their action when the two said external symmetrical and opposed forces are interrupted.
9. Probe according to claim 6, wherein said first actuator and/or said second actuator comprise a demultiplying mechanism for reducing the intensity of the force required for disengaging said first respectively second mobile element.
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10. Probe according to claim 9, wherein said demultiplying mechanism comprises at least two pairs of symmetrical connecting rods, each pair being articulated relative to a central point, said external forces being transmitted to said central points.
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11. Probe according to claim 9, wherein said demultiplying mechanism comprises at least one helical surface forming an inclined plane

or an inclined curved surface and driven in rotation by at least two racks on which said external forces are exerted.

12. Probe according to claim 9, wherein said demultiplying mechanism comprises at least one lever with unequal arms.

5 13. Probe according to claim 6, wherein said two external forces have a direction essentially perpendicular to said first axis and said two external forces are supported by at least two buttons placed on said probe in positions diametrically opposed relative to said first axis.

10 14. Probe according to claim 9, wherein said demultiplying mechanism is designed to supply an increasing demultiplication ratio for ultimately reducing the force required for keeping said first respectively second mobile element in disengaged position.

15 15. Probe according to claim 2, comprising one or several windows for indicating the angular position of said first respectively second mobile element.

16. Probe according to claim 15, comprising at least two windows for indicating the position of said second mobile element.

20 17. Probe according to claim 1, comprising a large-size light indicator allowing the probe's functioning to be controlled in all measuring positions.

18. Probe according to claim 17, comprising several light-emitting elements placed in various positions for allowing the probe's functioning to be controlled in all measuring positions.

25 19. Probe according to claim 1, comprising an external thermically insulating layer for avoiding the conduction of heat from the hands into the probe.

20. Probe according to claim 4, comprising a mechanism for keeping apart said first and/or second indexing elements during rotation of said first and/or second mobile elements.

5 21. Probe according to claim 1, comprising protecting elements protruding from the part of the body of said probe adjacent to the feeler, for protecting the internal mechanism during an accidental shock of said probe.

10 22. Probe according to claim 2, wherein the action of said first actuator on said first mobile element is substantially aligned and opposed to the force exerted by said first resilient element onto said first mobile element.

15 23. Probe according to claim 2, wherein the action of said second actuator on said second mobile element is substantially aligned and opposed to the force exerted by said second resilient element onto said second mobile element.